

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-57 canceled.

58. (currently amended): A pathogen-inactivating compound adsorption system for reducing the concentration of a low molecular weight pathogen-inactivating compound in a biological composition, wherein the pathogen-inactivating compound adsorption system comprises a housing compatible with the biological composition and containing an adsorption medium comprising adsorbent resin particles having a network pore structure immobilized by a within a sintered matrix formed from polymeric particulate material, wherein the diameter of the adsorbent particles ranges from about 1 μm to about 200 μm , wherein the adsorbent particles have an affinity for said pathogen-inactivating compound, wherein the system is configured to remove said pathogen-inactivating compound from said biological composition in a flow process, ~~and~~ wherein the system is configured so that the biological composition treated with the system maintains sufficient biological activity so that said biological composition is suitable for infusion within a human.

59. (canceled).

60. (currently amended): A system according to claim ~~59~~ 58, wherein the diameter of the adsorbent particles is between about 50 and 150 μm .

61. (canceled).

62. (canceled).

63. (canceled).

64. (canceled).

65. (currently amended): A system according to claim ~~58~~ ~~59~~ or claim ~~61~~, wherein the particle containing matrix is at least 3 mm thick.

66. (currently amended): A system according to claim ~~58~~ ~~59~~ or claim ~~61~~, wherein the adsorbent particles comprise adsorbent resin particles have a surface area greater than about 750 m²/g, and the porous adsorbent particles are between 30 and 70 percent of the weight of the adsorption medium.

67. (canceled).

68. (currently amended): A system according to claim ~~67~~ 58, wherein the adsorbent particles comprise adsorbent resin particles ~~have~~ having a surface area greater than about 750 m²/g.

69. (original): A system according to claim 68, wherein the adsorbent resin particles are polyaromatic.

70. (original): A system according to claim 69, wherein said adsorbent resin particles have a pore diameter between about 25 and 800 Å.

71. (original): A system according to claim 70, wherein said adsorbent resin particles have a pore diameter between about 25 and 150 Å.

72. (original): A system according to claim 71, wherein said adsorbent resin particles have a pore diameter between about 25 and 50 Å.

73. (original): A system according to claim 68, wherein the adsorbent resin particles do not require prewetting before use.

74. (original): A system according to claim 68, wherein the adsorbent resin particles are hypercrosslinked.

75. (currently amended): A system according to claim 58 or claim 68, ~~59, or 61~~ wherein the pathogen inactivating compound comprises a nucleic acid-binding compound.

76. (original): A system according to claim 75, wherein the nucleic acid-binding compound comprises a psoralen.

77. (original): A system according to claim 75, wherein the nucleic acid-binding compound comprises an acridine derivative.

78. (original): A system according to claim 75, wherein the nucleic acid-binding compound comprises a dye.

79. (currently amended): A system according to claim 75, wherein the adsorbent resin particles have an affinity for a nucleic acid-binding compound having an electrophilic group capable of reacting with a nucleophilic group of a quencher that quenches undesired side reactions of the pathogen-inactivating compound.

80. (currently amended): A system according to claim 79, wherein the adsorbent resin particles additionally have an affinity for said quencher.

81. (currently amended): A system according to claim 75, wherein the adsorbent resin particles additionally have an affinity for a degradation product of said nucleic acid-binding compound.

82. (currently amended): A method for reducing the concentration of a low molecular weight compound comprising a pathogen-inactivating compound in a biological composition, said method comprising treating the biological composition with a system of claim 58 or claim 68, ~~59, or 61~~ to bind the low molecular weight compound to the adsorbent particles and thereby reduce the concentration of the low molecular weight compound in the biological composition, wherein the biological composition treated with the system maintains sufficient biological activity so that said biological composition is suitable for infusion within a human.

83. (previously presented): A method for reducing the concentration of a low molecular weight compound comprising a nucleic acid-binding compound in a biological composition, said method comprising treating the biological composition with a system of claim 75 to bind the low molecular weight compound to the adsorbent particles and thereby reduce the concentration of the low molecular weight compound in the biological composition, wherein the biological composition treated with the system maintains sufficient biological activity so that said biological composition is suitable for infusion within a human.

84. (previously presented): A method for reducing the concentration of a low molecular weight compound comprising a psoralen nucleic acid-binding compound in a biological composition, said method comprising treating the biological composition with a system of claim 75 to bind the low molecular weight compound to the adsorbent particles and thereby reduce the concentration of the low molecular weight compound in the biological composition, wherein the biological composition treated with the system maintains sufficient biological activity so that said biological composition is suitable for infusion within a human.

85. (original): A method according to claim 84, wherein no more than about ten percent of an amount of said psoralen nucleic acid-binding compound originally added to said biological composition remains as free psoralen in said biological composition.

86. (previously presented): A method according to claim 84, wherein said psoralen nucleic acid-binding compound is selected from the group consisting of 4'-(4-amino-2-oxa)butyl-4,5',8-trimethyl psoralen, 8-methoxypsoralen, halogenated psoralens, isopsoralens and psoralens linked to quaternary amines, 5'-bromomethyl-4,4',8-trimethylpsoralen, 4'-bromomethyl-4,5',8-trimethylpsoralen, 4'-(4-amino-2-aza)butyl-4,5',8-trimethylpsoralen, 4'-(2-aminoethyl)-4,5',8-trimethylpsoralen, 4'-(5-amino-2-oxa)pentyl-4,5',8-trimethylpsoralen, 4'-(5-amino-2-aza)pentyl-4,5',8-trimethylpsoralen, 4'-(6-amino-2-aza)hexyl-4,5',8-trimethylpsoralen, 4'-(7-amino-2,5-oxa)heptyl-4,5',8-trimethylpsoralen, 4'-(12-amino-8-aza-2,5-dioxa)dodecyl-4,5',8-trimethylpsoralen, 4'-(13-amino-2-aza-6,11-dioxa)tridecyl-4,5',8-trimethylpsoralen, 4'-(7-amino-2-aza)heptyl-4,5',8-trimethylpsoralen, 4'-(7-amino-2-aza-5-oxa)heptyl-4,5',8-trimethylpsoralen, 4'-

(9-amino-2,6-diaza)nonyl-4,5',8-trimethylpsoralen, 4'-(8-amino-5-aza-2-oxa)octyl-4,5',8-trimethylpsoralen, 4'-(9-amino-5-aza-2-oxa)nonyl-4,5',8-trimethylpsoralen, 4'-(14-amino-2,6,11-triaza)tetradecyl-4,5',8-trimethylpsoralen, 5'-(4-amino-2-aza)butyl-4,4',8-trimethylpsoralen, 5'-(6-amino-2-aza)hexyl-4,4',8-trimethylpsoralen and 5'-(4-amino-2-oxa)butyl-4,4',8-trimethylpsoralen.

87. (previously presented): A method according to claim 83 wherein the nucleic acid-binding compound comprises an acridine derivative.

88. (original): A method according to claim 87, wherein the acridine derivative comprises N-(9-acridinyl)- β -alanine.

89. (previously presented): A method according to claim 83, wherein the nucleic acid-binding compound comprises a dye.

90. (original): A method according to claim 89, wherein the dye comprises methylene blue.

91. (original): A method according claim 84, wherein the biological composition comprises a blood product.

92. (original): A method according to claim 91, wherein the blood product consists essentially of plasma.

93. (original): A method according to claim 91, wherein the blood composition flows through the system as a result of a pressure differential which arises due to a hydrostatic head.

94. (original): A method according to claim 91, wherein the blood composition flows through the system as a result of a pressure differential which arises due to the use of a pump.

95. (original): A method according to claim 91, wherein the blood composition flows through the system at a flux between about 0.1 mL/cm²/min and about 10 mL/cm²/min.

96. (original): A method according to claim 95, wherein the blood composition flows through the system at a flux between about 0.2 mL/cm²/min and about 5 mL/cm²/min.

97. (original): A method according to claim 91, wherein the blood composition contains an original amount of factor XI, and said blood composition has at least about 91% of said original amount of factor XI after said treating with said system.

Claims 98-103 canceled.

104. (currently amended): A system according to claim 58, ~~59, or 75~~, wherein the adsorbent particles have an internal surface area between about 300 and 1100 m²/g.

105. (new): A system according to claim 58 or claim 68 wherein the sintered matrix comprises a polyolefin.

106. (new): A system according to claim 105 wherein the polyolefin comprises polyethylene.

107. (new): A system according to claim 106 wherein the polyethylene comprises an ultra high molecular weight polyethylene.

108. (new): A system according to claim 58 wherein the adsorbent particles comprise activated carbon.

109. (new): A system according to claim 108 wherein the activated carbon has a surface area greater than 950 m²/g.

110. (new): A system according to claim 109 wherein the activated carbon has a surface area greater than 1200 m²/g.

111. (new): A system according to claim 110 wherein the activated carbon has a surface area of about 2000 m²/g.

112. (new): A system according to claim 108 wherein the activated carbon is formed by steam activation of coconut shells.

113. (new): A system according to claim 68 wherein said adsorbent particles comprise nonionic macroporous and macroreticular resin particles having macropores and micropores.

114. (new): A method according to claim 91 wherein said blood product additionally contains activated complement and said adsorbent particles additionally bind the activated complement in said blood product.